

***SUMMARY DATA FOR CASE 3A***

This section contains the following economic data for case 3A:

- Capital Investment and Revenue Requirement Summary
- Total Plant Cost

CAPITAL INVESTMENT & REVENUE REQUIREMENT SUMMARY			
<b>TITLE/DEFINITION</b>			
Case:	IGCC w/ CO <sub>2</sub> Removal (3A)		
Plant Size:	403.5 (MW,net)	HeatRate:	9,226 (Btu/kWh)
Primary/Secondary Fuel(type):	Illinois #6	Cost:	1.24 (\$/MMBtu)
Design/Construction:	4 (years)	BookLife:	20 (years)
TPC(Plant Cost) Year:	1999 (Dec.)	TPI Year:	2000 (Jan.)
Capacity Factor:	65 (%)	CO <sub>2</sub> Removed	1,935,490 (tons/year)
<b>CAPITAL INVESTMENT</b>			
		<b>\$x1000</b>	<b>\$/kW</b>
Process Capital & Facilities		531,826	1318.0
Engineering(incl.C.M.,H.O.& Fee)		31,910	79.1
Process Contingency		20,701	51.3
Project Contingency		78,048	193.4
TOTAL PLANT COST(TPC)		\$662,484	1641.8
TOTAL CASH EXPENDED	\$662,484		
AFDC	\$58,742		
TOTAL PLANT INVESTMENT(TPI)		\$721,226	1787.4
Royalty Allowance			
Preproduction Costs		17,271	42.8
Inventory Capital		5,000	12.4
Initial Catalyst & Chemicals(w/equip.)			
Land Cost		700	1.7
TOTAL CAPITAL REQUIREMENT(TCR)		\$744,198	1844.3
<b>OPERATING &amp; MAINTENANCE COSTS (1999 Dollars)</b>			
		<b>\$x1000</b>	<b>\$/kW-yr</b>
Operating Labor		5,503	13.6
Maintenance Labor		5,145	12.7
Maintenance Material		7,717	19.1
Administrative & Support Labor		2,662	6.6
TOTAL OPERATION & MAINTENANCE		\$21,026	52.1
FIXED O & M			32.98 \$/kW-yr
VARIABLE O & M			0.34 ¢/kWh
<b>CONSUMABLE OPERATING COSTS,less Fuel (1999 Dollars)</b>			
		<b>\$x1000</b>	<b>¢/kWh</b>
Water		242	0.01
Chemicals		278	0.01
Other Consumables			
Waste Disposal		1,447	0.06
TOTAL CONSUMABLE OPERATING COSTS		\$1,967	0.09
BY-PRODUCT CREDITS (1999 Dollars)		(\$970)	-0.04
FUEL COST (1999 Dollars)		\$26,285	1.14
<b>Levelized (Over Book Life \$)</b>			
<b>PRODUCTION COST SUMMARY</b>			
	<b>\$/ton CO<sub>2</sub></b>		<b>¢/kWh</b>
Fixed O & M	\$0.86	33.0/kW-yr	0.58
Variable O & M	\$0.82		0.34
Consumables	\$0.13		0.09
By-product Credit	(\$0.07)		-0.04
Fuel	\$1.93		1.14
TOTAL PRODUCTION COST	\$3.66		2.10
LEVELIZED CARRYING CHARGES(Capital)	\$12.21	254.5/kW-yr	4.47
LEVELIZED (Over Book Life) BUSBAR COST OF POWER	\$15.87		6.57

ESTIMATE BASIS/FINANCIAL CRITERIA for REVENUE REQUIREMENT CALCULATIONS			
<b>GENERAL DATA/CHARACTERISTICS</b>			
Case Title:	IGCC w/ CO <sub>2</sub> Removal (3A)		
Unit Size:/Plant Size:	403.5 MW,net	403.5 MWe	
Location:	East-West Region		
Fuel: Primary/Secondary	Illinois #6		
Energy From Primary/Secondary Fuels	9,226 Btu/kWh	Btu/kWh	
Levelized Capacity Factor / Preproduction(equivalent months):	65 %	1 months	
Capital Cost Year Dollars (Reference Year Dollars):	1999 (December)		
Delivered Cost of Primary/Secondary Fuel	1.24 \$/MBtu	\$/MBtu	
Design/Construction Period:	4 years		
Plant Startup Date (1st. Year Dollars):	2000 (January)		
Land Area/Unit Cost	350 acre	\$2,000 /acre	
<b>FINANCIAL CRITERIA</b>			
Project Book Life:	20 years		
Book Salvage Value:	%		
Project Tax Life:	20 years		
Tax Depreciation Method:	Accel. based on ACRS Class		
Property Tax Rate:	1.0 % per year		
Insurance Tax Rate:	1.0 % per year		
Federal Income Tax Rate:	34.0 %		
State Income Tax Rate:	4.2 %		
Investment Tax Credit/% Eligible	%	%	
Economic Basis:	Over Book Constant Dollars		
Capital Structure	<u>% of Total</u>	<u>Cost(%)</u>	
Common Equity	45	12.00	
Preferred Stock	10	8.50	
Debt	45	9.00	
Weighted Cost of Capital:(after tax)		8.81 %	
Escalation Rates	<u>Over Book Life</u>	<u>1999 to 2000</u>	
General	% per year	% per year	
Primary Fuel	% per year	% per year	
Secondary Fuel	% per year	% per year	

Client: EPRI/DOE VISION 21 Project: INNOVATIVE POWER CYCLES				Report Date: 19-Sep-2000 12:44 PM								
TOTAL PLANT COST SUMMARY												
IGCC w/ CO <sub>2</sub> Removal (3A) 403.5 MW <sub>net</sub>				Estimate Type: Conceptual		Cost Base (Dec)		1999 (\$x1000)				
Acct No.	Item/Description	Equipment Cost	Material Cost	Labor		Sales Tax	Bare Erected Cost \$	Eng'g CM H.O. & Fee	Contingencies		TOTAL PLANT COST \$	\$/kW
				Direct	Indirect				Process	Project		
1	COAL & SORBENT HANDLING	6,657	1,368	6,086	426		\$14,537	872	3,082		\$18,491	46
2	COAL & SORBENT PREP & FEED	9,965	2,332	11,266	789		\$24,352	1,461	817	3,511	\$30,142	75
3	FEEDWATER & MISC. BOP SYSTEMS	4,423	4,268	4,456	312		\$13,459	808	3,188		\$17,454	43
4	GASIFIER & ACCESSORIES											
4.1	Gasifier & Auxiliaries(Destec)	10,037		10,609	743		\$21,390	1,283	2,139	2,481	\$27,293	68
4.2	High Temperature Cooling	34,637		36,625	2,564		\$73,826	4,430	7,383	8,564	\$94,201	233
4.3	ASU/Oxidant Compression	50,175		w/equip.			\$50,175	3,011	5,319	5,319	\$58,505	145
4.4-4.9	Other Gasification Equipment	13,331	4,396	12,564	879		\$31,170	1,870	1,203	4,697	\$38,941	97
	SUBTOTAL 4	108,181	4,396	59,798	4,186		\$176,561	10,594	10,724	21,061	\$218,940	543
5A	GAS CLEANUP & PIPING	34,343	4,017	28,619	2,003		\$68,982	4,139	2,229	11,043	\$86,393	214
5B	CO <sub>2</sub> COMPRESSION	37,171		11,514	806		\$49,492	2,969	7,869		\$60,330	150
6	COMBUSTION TURBINE/ACCESSORIE											
6.1	Combustion Turbine Generator	58,375	337	2,825	198		\$61,398	3,684	6,140	7,122	\$78,344	194
6.2-6.9	Combustion Turbine Accessories	58,375	337	398	28		\$63,161	46	3,730	243	\$1,051	3
	SUBTOTAL 6			3,223	226					7,363	\$79,396	197
7	HRSG, DUCTING & STACK											
7.1	Heat Recovery Steam Generator	13,428		2,021	141		\$15,590	935		1,653	\$18,178	45
7.2-7.9	HRSG Accessories, Ductwork and Stack	2,038	962	1,713	120		\$4,834	290		784	\$5,908	15
	SUBTOTAL 7	15,467	962	3,734	261		\$20,424	1,225		2,437	\$24,087	60
8	STEAM TURBINE GENERATOR											
8.1	Steam TG & Accessories	13,321		2,084	146		\$15,551	933		1,648	\$18,132	45
8.2-8.9	Turbine Plant Auxiliaries and Steam Piping	4,154	382	3,276	229		\$8,041	482		1,486	\$10,010	25
	SUBTOTAL 8	17,474	382	5,361	375		\$23,592	1,416		3,135	\$28,142	70
9	COOLING WATER SYSTEM	4,795	3,051	4,782	335		\$12,963	778	2,547		\$16,288	40
10	ASH/SPENT SORBENT HANDLING SYS	5,040	785	4,617	323		\$10,766	646	790	1,382	\$13,585	34
11	ACCESSORY ELECTRIC PLANT	10,251	4,833	12,053	844		\$27,981	1,679	5,043		\$34,703	86
12	INSTRUMENTATION & CONTROL	4,879	737	3,677	257		\$9,551	573	1,430		\$11,554	29
13	IMPROVEMENTS TO SITE	2,061	1,215	4,830	338		\$8,444	507	2,685		\$11,636	29
14	BUILDINGS & STRUCTURES		3,639	4,600	322		\$8,561	514	2,269		\$11,343	28
	TOTAL COST	\$319,084	\$32,321	\$168,618	\$11,803		\$531,826	\$31,910	\$20,701	\$78,048	\$662,484	1642